

WHAT IS CLAIMED IS:

1. A locking block for a compact semi-automatic pistol having a frame, a slide, a barrel and a firing mechanism, said locking block comprising:
 - a front end having an substantially u-shaped opening;
 - a rear end;
 - laterally spaced side walls, each side wall having a guide rail which engages a longitudinally extending groove formed in the slide and guides the slide forward and rearward relative to the frame of the pistol, said guide rails having front and rear edge surfaces and a bottom surface;
 - a means for securing the locking block to the frame of the pistol; and
 - a means for reducing the relative movement of the block and frame upon discharge of the pistol.
2. The locking block of claim 1 wherein the front and rear edge surfaces of the guide rails are chamfered reducing the surface area of the guide rails in contact with the slide of the pistol.
3. The locking block of claim 2 wherein the front and rear edge surfaces each have upper and lower portions, said upper and lower portions each having a cut-away portion at a chamfer angle of about 45 degrees relative to a firing axis of the pistol resulting in three surfaces per front and rear edge surface.
4. The locking block of claim 1 wherein the bottom surface of the guide rails is convex, the convex bottom surface reducing the surface area of the guide rails in contact with the slide of the pistol.
5. The locking block of claim 1 wherein the means for reducing relative movement includes a rib transverse to a firing axis of the pistol located on

each side wall of the block, the transverse ribs engage grooves located in the frame of the pistol.

6. The locking block of claim 1 wherein the means for securing the locking block to the frame of the pistol further comprises bore transverse to a firing axis of the pistol which aligns with a transverse bore in the frame of the pistol and accepts a pin to secure the block to the frame.

7. The locking block of claim 1 wherein the rear end of the block includes a crossbar transverse to a firing axis of the pistol, said transverse crossbar engages the barrel and halts the rearward longitudinal movement of the barrel upon discharge of the pistol.

8. A locking block for a compact semi-automatic pistol having a frame, a slide, a barrel and a firing mechanism, said locking block comprising:

a front end having an substantially u-shaped opening;
a rear end;
laterally spaced side walls, each side wall having a guide rail which engages a longitudinally extending groove formed in the slide and guides the slide forward and rearward relative to the frame of the pistol, said guide rails having front and rear edge surfaces and a bottom surface, said front and rear edge surfaces of the guide rails are chamfered reducing the surface area of the guide rails in contact with the slide of the pistol, said bottom surface of the guide rails is convex further reducing the surface area of the guide rails in contact with the slide of the pistol;

a means for securing the locking block to the frame of the pistol; and
a means for reducing the relative movement of the block and frame upon discharge of the pistol.

9. The locking block of claim 8 wherein the front and rear edge surfaces each have upper and lower portions, said upper and lower portions each

having a cut-away portion at a chamfer angle of about 45 degrees relative to a firing axis of the pistol resulting in three surfaces per front and rear edge surface.

10. The locking block of claim 8 wherein the means for reducing relative movement includes a rib transverse to the firing axis of the pistol located on each side wall of the locking block, the transverse ribs engage grooves located in the frame of the pistol, said ribs extending transversely along only a portion of the side walls such that there is a discontinuity between the ribs and the guide rails.

11. The locking block of claim 8 wherein the means securing the locking block to the frame of the pistol further comprises a bore transverse to a firing axis of the pistol which aligns with a transverse bore in the frame of the pistol and accepts a pin to secure the block to the frame.

12. The locking block of claim 8 wherein the rear end of the block includes a crossbar transverse to a firing axis of the pistol, said transverse crossbar engages the barrel and halts the rearward longitudinal movement of the barrel upon discharge of the pistol.

13. A compact semi-automatic pistol comprising:
a frame;
a barrel mounted on the frame, said barrel having a firing axis;
a slide reciprocally mounted on the frame; and
a locking block, said locking block having a front end with a substantially u-shaped opening, a rear end, laterally spaced side walls, each side wall having a guide rail which engages a longitudinally extending groove formed in the slide and guides the slide forward and rearward relative to the frame of the pistol, said guide rails having front and rear edge surfaces and a bottom surface, said locking block further including a means for securing the locking block to the frame of the pistol, said means is a bore transverse to a firing axis of the pistol which aligns with a transverse bore in the frame of the pistol and accepts a pin to secure the block to the frame, and a means for reducing the relative movement of the block and frame upon discharge of the pistol, said means are ribs transverse to the firing axis of the pistol located on each side wall of the locking block, the transverse ribs engage grooves located in the frame of the pistol.

14. The compact semi-automatic pistol claim 13 wherein the front and rear edge surface of the guide rails are chamfered reducing the surface area of the guide rails in contact with the slide of the pistol.

15. The compact semi-automatic pistol of claim 14, wherein the front and rear edge surfaces each have upper and lower portions, said upper and lower portions each having a cut-away portion at a chamfer angle of about 45 degrees relative to the firing axis of the barrel resulting in three surfaces per front and rear edge surface.
16. The compact semi-automatic pistol of claim 13, wherein the bottom surface of the guide rails is convex, the convex bottom surface reducing the surface area of the guide rails in contact with the slide of the pistol.
17. The compact semi-automatic pistol of claim 13, wherein the means for reducing relative movement includes a rib transverse to the firing axis of the pistol located on each side wall of the locking block, the transverse ribs engage grooves located in the frame of the pistol.
18. The compact semi-automatic pistol claim 13, wherein the means for securing the locking block to the frame of the pistol further comprises a bore transverse to a firing axis of the pistol which aligns with a transverse bore in the frame of the pistol and accepts a pin to secure the block to the frame.
19. The compact semi-automatic pistol of claim 13, wherein the rear end of the block includes a crossbar transverse to a firing axis of the pistol, said transverse crossbar engages the barrel and halts the rearward longitudinal movement of the barrel upon discharge of the pistol and cams between a locked and unlocked position of the barrel.

20. A semi-automatic pistol comprising:

- a frame;
- a barrel mounted on the frame, said barrel having a firing axis;
- a slide reciprocally mounted on the frame; and
- a locking block, said locking block having a front end within an opening shaped to accommodate the recoil spring of the pistol, a rear end, laterally spaced side walls, each side wall having a guide rail which engages a longitudinally extending groove formed in the slide and guides the slide forward and rearward relative to the frame of the pistol, said guide rails having front and rear edge surfaces and a bottom surface, said locking block further including a means for securing the locking block to the frame of the pistol and a means for reducing the relative movement of the block and frame upon discharge of the pistol, said means for reducing relative movement includes a rib transverse to the firing axis of the pistol located on each side wall of the locking block, the transverse ribs engage grooves located in the frame of the pistol, said ribs extending transversely along only a portion of the side walls such that there is a discontinuity between the ribs and the guide rails.